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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,170	02/22/2005	Bernhard Gleich	DE 020195	7663

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EXAMINER

CHEN, VICTORIA W

ART UNIT	PAPER NUMBER
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3739

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/525,170	Applicant(s) GLEICH, BERNHARD	
	Examiner Victoria W. Chen	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/22/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/22/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: pg. 2, ln. 4, the phrase “in the first sub-region so weak” should be changed to –in the first sub-region is so weak-

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Pg. 15, ln. 18, the position of the quotation marks around “compensation temperature” should be corrected.

The reference to claim numbers within the specification is improper because claims are frequently changed or renumbered during the application process. Applicant’s specification is full of references to claim numbers that must be removed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 provides for the use of “monodomain particles of a ferromagnetic material or a ferrimagnetic material” as claimed in claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Art Unit: 3739

Claim 4 provides for the use of “multidomain particles of a ferromagnetic material or a ferrimagnetic material” as claimed in claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 5 provides for the use of “substrates which have dimensions in the μm range” as claimed in claim 4, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 6-8 provides for the use of “particles...” as claimed in claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 3-8 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

The terms "rapidly", "slowly", "low" and "high" in claim 13 are relative terms, which render the claim indefinite. The terms "rapidly", "slowly", "low" and "high" are not defined by

Art Unit: 3739

the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 6, 7 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kraus, Jr. et al. (US Pat No 6470220 B1).

Regarding claims 1, 2 and 9, Kraus, Jr. discloses a method for heating magnetic particles in a target region by generating a magnetic field having a first low magnetic strength region and a second high magnetic strength region is formed and changing the position in space of the sub-regions for so long and with such a frequency that the target region is heated [col. 13, ll. 9-62].

Regarding claim 6, Kraus, Jr. discloses the use of particles in colloidal dispersion [col. 6, ll. 25-40].

Art Unit: 3739

Regarding claim 7, Kraus, Jr. discloses the encapsulation of the particles in a molecular envelope for tissue-specific concentration [col. 5, ll. 57-59].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus, Jr. in view of Handy et al. (US Pat No 7074175 B2).

Regarding claim 3, Kraus, Jr. discloses everything as previously described above, including the use of ferromagnetic material for treatment, except fails to specifically disclose the use of monodomain particles. Handy teaches the use of monodomain ferromagnetic and ferrimagnetic particles for magnetic heating therapy [col. 10, ll. 41-54]. Handy teaches that monodomain particles are preferred because the heating mechanism exhibited by single domain particles may be optimized to produce superior heating properties over larger particles for disease treatment. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use monodomain ferromagnetic or ferrimagnetic particles for magnetic heating therapy because they may be optimized to produce superior heating properties over larger particles for disease treatment.

Regarding claim 8, Kraus, Jr. discloses everything as previously described above, however does not disclose the Curie temperature of the particles being the maximum permissible temperature in the target region. Handy teaches that above the Curie temperature of the

Art Unit: 3739 .

magnetic particle, the particle becomes unresponsive to the applied magnetic field and ceases to generate heat. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to make the maximum permissible temperature in the target region the Curie temperature of the particles, because above that temperature the particles cease to generate heat used for the therapy.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus, Jr. in view of Gray et al. (US Pat No 6565887 B1). Kraus, Jr. discloses everything as previously described above, however does not specifically disclose the use of multidomain particles. Gray teaches the use of multi-domain ferromagnetic particles for magnetic heating therapy [col. 7, ll. 1-3] because for multi-domain ferromagnetic particles the hysteresis loss is independent of particle size. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to use multidomain ferromagnetic particles because the hysteresis loss will then be independent of particle size.

Allowable Subject Matter

Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3739

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 20030129763 A1 US-PGPUB CHAMBERLAIN, CRAIG S. et al. METHOD FOR
MEASURING STRESS LEVELS IN POLYMERIC COMPOSITIONS

US 20030006773 A1 US-PGPUB Ries, Guenter Magnetic resonance apparatus
having a basic field magnet

US 6997863 B2 USPAT Handy; Erik S. et al. Thermotherapy via targeted delivery of
nanoscale magnetic particles

US 6167313 A USPAT Gray; Bruce Nathaniel et al. Targeted hysteresis hyperthermia
as a method for treating diseased tissue

US 6635009 B2 USPAT Feucht; Peter Magnetic field applicator for heating magnetic
substances in biological tissue

US 6599234 B1 USPAT Gray; Bruce Nathaniel et al. Heating of magnetic material by
hysteresis effects

US 6575893 B2 USPAT Feucht; Peter Magnetic field applicator for heating magnetic
substances in biological tissue

US 4662359 A USPAT Gordon; Robert T. Use of magnetic susceptibility probes in the
treatment of cancer

US 6149576 A USPAT Gray; Bruce Nathaniel et al. Targeted hysteresis hyperthermia
as a method for treating tissue

US 5622686 A USPAT Gordon, deceased; David et al. Diagnosis and treatment of viral
effects using magnetic metal transferrin particles

US 4622952 A USPAT Gordon; Robert T. Cancer treatment method

US 5658234 A USPAT Dunlavy; John Harold Method for treating tumors

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victoria W. Chen whose telephone number is (571) 272-3356. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VWC
12/22/06

Michael Reffley
MICHAEL REFFLEY
PRIMARY EXAMINER